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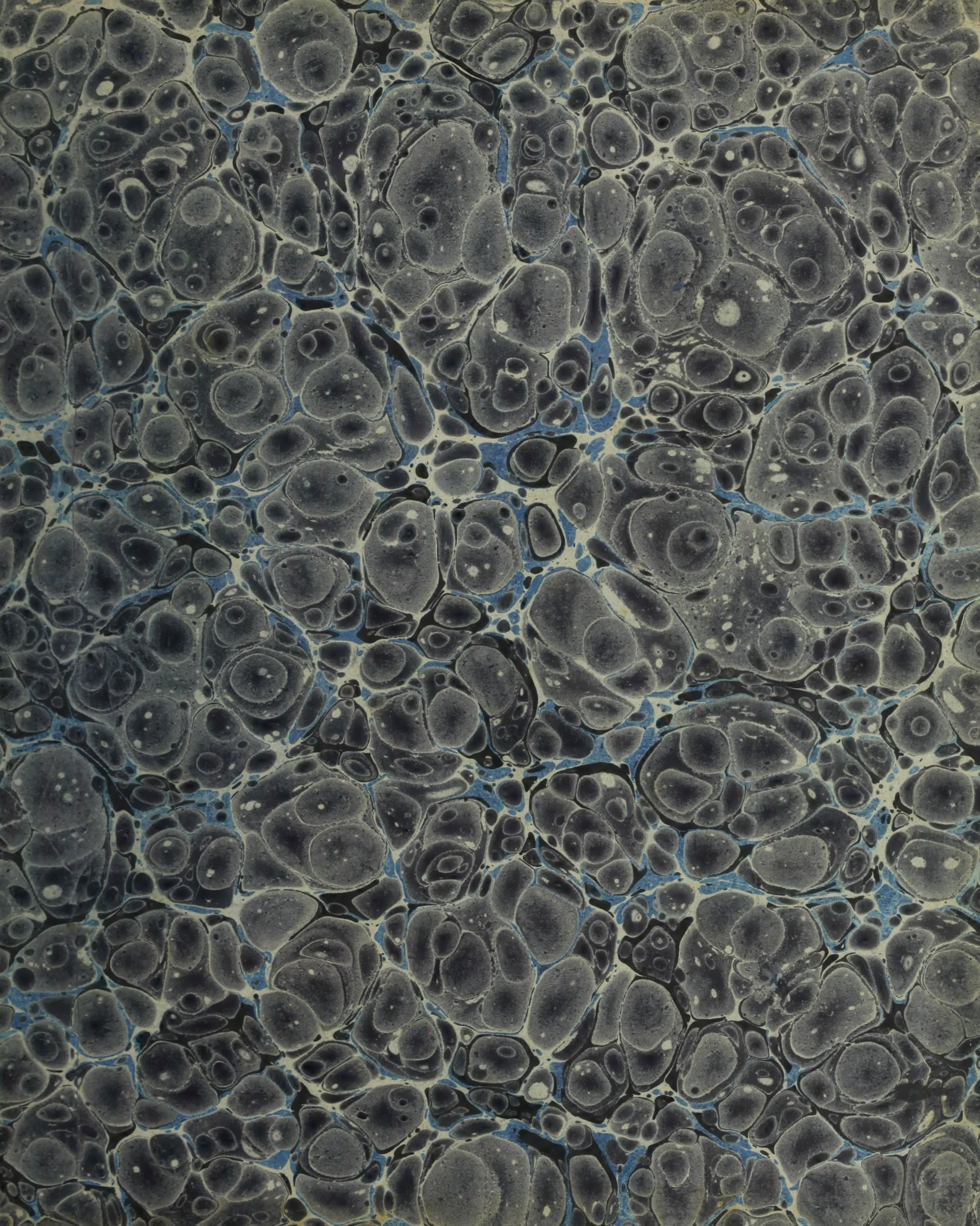

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from Douglas A. Reid

ILLUSTRATIONS

OF THE

DISEASES OF THE BREAST;

BY

Sir ASTLEY COOPER, Bart. F.R.S.

Serjeant Surgeon to His Majesty;

Consulting Surgeon of Guy's Hospital; Lecturer on Anatomy and Surgery, &c. &c. &c.

In Two Parts.—Part I.

LONDON:

Printed by S. McDowall, Leadenhall Street;

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LONGMAN, REES, ORME, BROWN, & GREEN,

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1829.

DEDICATION.

To BENJAMIN HARRISON, Esq.

TREASURER OF GUY'S HOSPITAL, &c.

MY DEAR SIR,

In feelings of respect for the zeal, ability, humanity, and love of science which you have manifested as Treasurer of Guy's Hospital—in admiration of all the virtues which can adorn the man, in your private character—and with heartfelt gratitude for numerous and continued acts of kindness to myself, this Work is dedicated by

Your sincere and faithful Friend,

ASTLEY COOPER.

January 1st, 1829.

DEDICATION.

PREFACE.

I have divided these Illustrations of the Diseases of the Breast into two Parts, *viz.* into those which are, and into those which are not malignant.

In this Part, I have confined myself to the description of the diseases which are not malignant; distinguishing those which do not arise from a vitiated state of the system, nor produce any dangerous constitutional effects; and do not contaminate the parts in their neighbourhood, nor affect those at a distance from their original seat.

However, it is right to observe, that some of these swellings, when they have existed long in a dormant state, will have alterations produced in them by changes of the constitution, by which their extirpation may be rendered necessary; for malignancy may be lighted up in them by constitutional disease—by anxiety of mind—and by the cessation of the menstrual secretion.

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INTRODUCTORY OBSERVATIONS

ON THE

DISEASES OF THE BREAST.

CHAPTER I.

GREAT advantages may be derived from the examination of morbid structures, and from a comparison of their external character and symptoms with their internal appearances. In the first place, such a comparison facilitates the treatment and cure of diseases; and, secondly, even in those cases for which a remedy has not yet been found, it powerfully assists the Surgeon in forming a diagnosis of the various complaints to which any organ of the body is liable.

Advantages of examining morbid structures in the diagnosis, and treatment of disease.

The difference between the experienced and scientific, and the ignorant and unobserving member of the profession, is manifested, in the former readily discovering the distinctive character

Difference between the scientific and unobserving Surgeon.

of disease as soon as it is presented to his attention; while the other guesses at its nature, and if right, is right only by accident.

It must likewise be admitted, that though no specific remedy may yet have been discovered for the cure of some diseases, it is still a great advantage to be able to discriminate curable from incurable cases; the dangerous from the slight; those which require surgical operations from those which do not demand them; and such as admit of a trifling operation from those which call for one of extreme severity.

Advantages of distinguishing curable from incurable diseases.

The truth of these observations cannot be more fully exemplified in the Pathology of any part of the body than in the diseases incidental to the female Breast; for this organ is liable to almost all the complaints of other structures, and to some which are peculiarly its own. The uninformed Surgeon is too apt to fall in with the opinion of the vulgar, and to confound all the swellings of the breast under the general term of Cancer; and yet every Surgeon who has fully investigated the character of these swellings, by examination of the diseased parts after operation, must be aware of the great variety which prevails in their nature and appearances; and is therefore led to the conclusion, that far from their being all of one family, a great number of genera of tumours actually exist. He will soon learn that some are the effect of acute inflammation; that others are of a simple chronic kind;

Numerous complaints in the Breast.

Confounded

Their sources.

that some are chronic accompanied with specific action; and that others are specific and malignant. It is therefore the Surgeon's duty to discriminate these differences in the living body; and this he can only accomplish by a very careful and nice manipular examination of the complaint, by having repeatedly inspected the parts which have been removed in operations, by examining those which have been met with in the body after death, and by an accurate and minute history of the case. The experience arising from these different sources gives him the power of accurately judging of the nature of the disease when it is presented to his attention in the living body.

Diagnosis necessary.

The result of such knowledge is frequently the source of great security and happiness to a person afflicted with a disease in the breast, as well as of great satisfaction to the Surgeon. I have scarcely witnessed a stronger expression of delight than that which has illuminated the features of a female—perhaps the mother of a large family dependant upon her for protection, education, and support—who, upon consulting a Surgeon for some tumour in her bosom, and expecting to hear from him a confirmation of the sentence she had pronounced upon herself, receives, on the contrary, an assurance that her apprehensions are unfounded. Pale and trembling, she enters the Surgeon's apartment, and baring her bosom, faintly articulates—Sir, I am come to consult you for a Cancer in my breast;—and when, after a careful

Advantage derived from it.

examination, the Surgeon states, he has the pleasure of assuring her that the disease is not cancerous—that it has not the character of malignancy—that it is not dangerous, and will not require an operation; the sudden transition from apprehension to joy brightens her countenance with the smile of gratitude; and the happiness of the moment can hardly be exceeded, when she returns with delighted affection to the family, from which she had previously considered herself destined soon to be separated by death, with the alternative only of being saved by a dubious and painful operation.

The diseases of the breast may be divided into three classes :—

Classes of diseases in the breast.

First, into those which are the result of common inflammation, whether it be acute or chronic.

Secondly, into complaints which arise from peculiar or specific action, but which are not malignant, and do not contaminate other structures.

Thirdly, into those which are not only founded on local, malignant, and specific actions, but which are connected with a peculiar and unhealthy state of the constitution.

By a malignant complaint, I mean to describe a local diseased action, which not only affects the parts in which it is originally situated, but contaminates those in its neighbourhood: it is produced by a morbid state of the constitution, and is frequently accompanied by similar disease in other, and even remote, parts of the body.

The first of these classes comprehends the acute inflammation of the organ, as the milk abscess; the chronic inflammation, which remains for a length of time in a state of indolent swelling, and often terminates after a lapse of weeks or months in an indolent abscess; and, thirdly, a lacteal tumour, in which a chronic inflammation is followed by an obstruction in one of the lactiferous tubes, and produces a large lacteal or lactiferous swelling.

Acute inflammation.

Chronic inflammation.

Lactiferous swelling.

In the second class of diseases of the breast we find several species of tumour, and they are as follow:—

1st, the Hydatid.

2d, the Chronic Mammary Tumour.

3d, the Ossific.

4th, the Adipose.

5th, Large and pendulous Breast.

6th, the Scrofulous.

7th, the Irritable Breast.

8th, Ecchymosis of the Breast.

Specific, but not malignant.

In the third Class we find the two malignant diseases, which consist of the scirrhous and fungous tubercle.

Malignant Tumours.

It will be my object in the following pages, with the aid of engravings, to detail the symptoms, describe the external characters, and exhibit the internal appearances of each of these diseases, so far as I have been able to observe and examine

Object of this Work.

them; and in doing this, I shall endeavour to point out their discriminating marks, so as to enable the Surgeon to distinguish them in the living body.

I am fully aware of the difficulty of the task, and am ready to acknowledge that I have been often mistaken in my diagnosis; but if such errors of judgment occur to one who has had a considerable share of practice and experience, and trusts he has not been an idle or inattentive spectator of what has been presented to his observation, how often must those be liable to error who do not industriously investigate the nature of disease by dissection, and compare it with its external characters in the living body? What I sincerely hope is, that this Work will have a good effect in inducing others to exert their best endeavours to pursue the subject with greater zeal and ability, and to attain the grand object which we ought always to have in view—to exercise our profession in the most scientific manner, and to do all in our power to diminish the evils and sufferings of humanity.

CHAPTER II.

On the Effects of common Inflammation in the Breast.

Effects of acute and chronic inflammation.

Having divided the Diseases of the Breast into those which are the result of common inflammation, whether acute or chronic, into those which are of a peculiar or specific nature, and into such as are specific and malignant, I shall now proceed shortly to describe the effects which are produced upon it by acute and chronic inflammation.

Acute inflammation.

It is unnecessary that I should enter into any long detail of the symptoms, character, and treatment of acute inflammation in this organ, as it differs little from the same inflammation in other parts of the body, excepting in the severity of suffering which it produces.

Adhesion.

It is adhesive in the first stage, suppurative in the second, and ulcerative in the third. A firm and sensitive swelling of the whole or part of the mammary gland is produced in the first stage; and the dense cellular or fascial membrane with which it

is enveloped, and by which all its parts are united, not easily yielding to the inflammatory swelling, often occasions most excessive suffering. The serous and fibrous portions of the blood are poured into, and fill the interstices of the inflamed structure, and the latter thus produces the solid swelling. To this enlargement succeeds a blush of inflammation upon the surface of the breast; throbbing, pulsatory, and very acute pain follows it; a particular
Suppurative prominence and smoothness are observed at one part of the tumour, with a sense of fluctuation from the presence of matter. The constitution is also highly irritated, which is evinced by the occurrence of shivering, succeeded by heat, and profuse perspiration. Over the most prominent part of the swelling the cuticle separates,
Ulcerative. ulceration follows in the cutis, and the matter becomes discharged through the aperture thus produced.

This process requires from ten days to three weeks for its
Time. completion; but varies considerably in time in different persons, according to the irritability of their constitution, and to the depth at which the abscess is formed.

Cause. Its principal cause is the rush of blood which takes place each time the child is applied to the bosom, and which by nurses is called the draught, and is the preparatory step to the secretion of milk. Such occasional irregular, violent, and frequent determinations of blood produce inflammation; and the necessary frequent exposure of the bosom in suckling, as well as the active

exertions of the child in sucking, add to the occasional irregularities of the circulation. The nurse also often produces these abscesses immediately after the lying-in, by refusing to put the child early to the breast, and by stimulating the mother with strong drinks. By the first, the child is refused a secretion which precedes that of pure milk, and which often acts as a wholesome aperient to it, and the breast of the mother is excited by being permitted to remain full; whilst by the latter, the mother is heated, and a disposition to inflammation is engendered.*

Mode of treatment.

The best mode of treatment in these cases is to use, in the adhesive stage, a lotion of one ounce of spirit of wine, and five ounces of water, or of liquor plumbi dilutus to the part, and to purge the patient, by giving repeated doses of castor oil, or sulphate of magnesia. But if the patient suffer from the cold produced by the evaporation of the spirit, a simple tepid poultice may be substituted for it, occasionally applying leeches to the swelling, still recollecting that the chief dependence is upon purging.

Evaporating lotions and purges.

Poppy fomentation and poultice.

By these means the suppurative stage will often be prevented; but if matter should form, fomentations of poppy decoction, and poultices made with the same decoction mixed with bread, should be applied upon the breast three or four times a day; as these by

* I have heard Dr. Key say that puerperal fever is often excited by the early and injudicious use of stimulants.

their warmth encourage secretion, by their moisture sooth and relax the part, and by their narcotic qualities diminish the sensibility of the nerves.

Constitutional treatment.

In order still farther to mitigate the sufferings of the patient, to diminish irritability, and to calm the symptoms of irritation, it is necessary to give opium combined with the liquor ammoniæ acetatis, or simple saline draughts, with small doses of the magnesiæ sulphas.

Opened or not.

It is a question with Surgeons, whether these abscesses ought to be opened by art, or be left to the processes of nature; and the following should be the reply to this query:—If the abscess be quick in its progress, if it be placed on the anterior surface of the breast, and if the sufferings which it occasions are not excessively severe, it is best to leave them to their natural course, rather than to employ the lancet for the discharge of the matter. But if, on the contrary, the abscess in its commencement be very deeply placed—if its progress be tedious—if the local sufferings be excessively severe—if there be a high degree of irritative fever, and the patient suffer from profuse perspiration, and want of rest, much time is saved, and a great diminution of suffering produced, by discharging the matter by the lancet.

Still it is wrong to penetrate with the lancet through a thick covering of the abscess, as the opening does not succeed in establishing a free discharge of matter; for the aperture closes

by adhesion, the accumulation of matter proceeds, and ulceration will still continue: on this account, the opening should be made where the matter is most superficial, and the fluctuation is distinct, and it should be in size proportioned to its depth.

Varieties.

The varieties which I have seen in these abscesses, are that several sometimes form in the same breast, quickly succeeding each other, and leading to a very protracted suffering. In these cases opium and quinine will be required, to lessen irritability, and support the strength of the system. Sometimes an abscess is produced at a great depth in the breast, and discharges itself by several different apertures, forming sinuses of various extent. The best mode of treatment of these cases, as far as I have had an opportunity of observing, is to inject them with a solution of two or three drops of the strong sulphuric acid to an ounce of rose-water, and to apply the same solution by folds of linen over the bosom, by which the secretion of matter is checked, and adhesion is produced.

Sinuses.

A deep abscess.

Now and then a deep-seated abscess forms between the posterior surface of the breast and the ribs, which, when it breaks, leaves a sinus which leads to the ribs. An exfoliation of part of the rib afterwards occurs, occasioning a very protracted suffering; and in these cases, as well as in the former, injecting the diluted acids is the best practice.

The division of the sinus by the knife is unnecessary, as it

will heal by adhesion in the former case, and in the latter, unless the exfoliating bone be loose, no advantage will be derived from the incision.

Malignant disease consequent on milk abscess.

I once saw a lady of a very delicate constitution, and who suffered under very great anxiety of mind, from her husband having been confined in prison for debt, who after her lying-in had a milk abscess in her bosom, which broke, and discharged large quantities of matter; and then, instead of healing, the whole breast became excessively swollen, and a truly fungoid excrescence appeared, by which disease she was soon destroyed.

A hardness sometimes remains in the breast after these abscesses, which continues for a great length of time if something be not done to promote absorption; and as a morbid action will sometimes, and at a very distant period, arise in the swelling, it is a great object to dissipate it quickly; which will be best effected by the application of the Emplastrum Ammoniaci cum Hydrargyro, or by rubbing the part with the Iodine Ointment.

Hardness remaining.

In these milk abscesses it becomes a question whether the child should suck the breast, or not. If the abscess be small, the child may be put to the diseased breast as well as the other; but if much of the mamma be involved in the disease, the child should be put to the other breast; but that which is inflamed should be drawn by the mother herself, by means of the glass tube constructed for the purpose. As the pump which is sometimes

Query respecting weaning.

employed, bruises the breast, and gives much pain, it ought not to be used. As a general rule, it is best to continue the child at the breast so long as the mother's sufferings will admit of it. Child permitted to suck.

These abscesses are sometimes the result of soreness in the nipples, which appears in three forms:—first, in simple excoriation; secondly, in deep cracks at the junction of the nipple with the areola; and, thirdly, in deeper ulceration of the nipple itself, by which a part of it is removed. The suffering from these sores is often sufficiently great to prevent the frequent application of the child to that bosom, which leads to a great accumulation of milk, and to a degree of distention which occasions inflammation. To prevent this, the breast should be drawn; but the sooner the child can be restored to it, the better. The best application to the sore nipple is a solution of borax in water, in the proportion of a drachm of borax, three ounces and a half of water, and half an ounce of spirit of wine. Some use solutions of alum, some the sulphate of zinc, and some the supernatant liquor of a mixture of the liquor calcis with the submuriate of mercury. Also to prevent the nipples from becoming sore, to which many women are extremely subject, it is right to wash them some time before the lying-in with strong brine, which hardens the cuticle, and renders it less prone to ulceration and inflammation.

Sore nipples. Three states of. Produce abscesses. Excoriation. Treatment. Prevention.

When the nipple is deeply ulcerated, if the child continue Ulcerated.

Shield. to suck, it must be through the intervention of a shield prepared with the cow's teat.

Small nipple. When women marry young, the nipple is often very small; the child is unable to suck it, and the attempt to do so, produces excessive pain. The nurse should in this case frequently suck the breast, which she is able to do with much less pain than the child, because her mouth not only envelopes the nipple, but a large portion of the breast around it.

Ointments in general do not agree as applications to these sores; but if any be employed under a shield, it should be the ointment of bismuth, or the ointment of zinc, or simple cerate.

Of Chronic Abscesses.

Chronic Abscesses. The abscesses which I have hitherto described, usually pass through their different stages in from three to five weeks; but under chronic inflammation, an abscess is sometimes produced, which, from the length of time it is forming, from the little pain which attends it, from the absence of redness, and heat in the part, and from the want of rigors and other constitutional symptoms, prevent the suspicion of the formation of matter, and the swelling is supposed to be a malignant tumour which requires an operation for its removal.

Not suspected.

In proof of this, a woman was sent to me from Sussex who had a tumour in her breast, which I was requested to remove; and when she was seated before me for that purpose, I found, upon examining the swelling with attention, a fluctuation in its centre surrounded by a wall of hardness, with tenderness in the centre upon pressure. I therefore put a lancet into the seat of the fluctuation, to discover the nature of the fluid, and a considerable quantity of purulent matter was discharged through the orifice. Case.

I was also requested to see an out-patient at Guy's Hospital, who had a swelling in her breast with a fluctuation in its centre, which had existed several months, into which when a lancet was put, a large quantity of matter was discharged. Although there was no discoloration, and the swelling had existed several months, yet I thought it contained matter, from the sense of fluctuation, and from the tenderness the patient expressed upon slight pressure, which would not have been the result if a serous fluid had been collected. Case.

In similar cases I have seen the operation for removing the swelling begun, and in its progress the knife having accidentally entered the abscess, the Surgeon by escape of the matter having been informed of his error, the operation was suspended, and a poultice being applied, the case ended favourably. Mistaken.

As there is some defect in the constitution, or deficiency in some

Constitutional treatment.

of the secretions in these chronic swellings, the patient requires the Pilula Hydrargyri Submuriatis Composita at night, and the bark with soda twice or three times in the day; or the compound infusion of gentian with soda and rhubarb. Locally when in the adhesive stage, the Emplastrum Ammoniaci cum Hydrargyro should be applied, or a solution of Muriate of Ammonia with rectified spirit of wine, both of which are used upon the principle of exciting external irritation, and of promoting absorption.

Locally in the adhesive stage.

When suppurating.

When it is in the suppurative stage, the abscess should be opened, and the part be poulticed. The constitutional treatment is to consist of a generous diet, and of tonic medicines. When they ulcerate, and sinuses form, and are difficult to heal, as they are wont to be, stimulating injections must be employed, lotions of a similar kind be applied, and the general health be improved.

I have seen in a chronic abscess in the breast, the glands in the axilla enlarged from simple irritation only, and which decreased after the disease of the breast was relieved.

Of the Lacteal or Lactiferous Swelling.

Lactiferous Swelling.

A swelling is sometimes formed in the breast after a lying-in, which I have called the lacteal or lactiferous, because it arises from a large collection of milk in one of the lactiferous tubes.

Its cause is a chronic inflammation of one of the lactiferous tubes near the nipple, by which its aperture becomes closed, and the tube obliterated to the extent of an inch or more. Cause of.

The patient applies to the Surgeon some time after delivery with a swelling in the breast; unpreceded by the symptoms of abscess, it distinctly fluctuates, and she complains exceedingly of a sense of distention in the part; and when the child is put to the breast to relieve it, the pain and distention are increased by the draught of milk which enters the breast so soon as the child begins to suck. The swelling is confined to one portion of the breast, from the nipple to the circumference of the organ, and it gives a distinct sense of fluctuation. The cutaneous veins are very large, but the part is otherwise undiscoloured. If a lancet be passed into the swelling, several ounces of milk are discharged; and the milk being suffered to rest for a few hours, forms a cream upon its surface. If a slight puncture only be made, the milk be discharged, and the opening suffered to immediately close, the accumulation recommences, and in a short time the same appearances and sufferings are renewed. Symptoms. Soon fills if discharged.

When the distention of the swelling is excessive, it sometimes ulcerates, and discharges the milk which it has contained, by a small aperture at a little distance from the nipple; and the opening so produced often continues through the whole period of suckling, the milk being lost, from the aperture not being received into Sometimes ulcerates.

the child's mouth: and this opening is difficult to heal, until by weaning the child, and by purges, the secretion of milk be entirely checked.

Treatment. The treatment which this case requires is as follows:—If the mother be prevailed upon to wean her child, as the secretion of milk will soon cease in this obstructed part as in other parts of the breast, a simple puncture will suffice to relieve the distended tube of the milk which it contains.

But if the child still continue at the breast, the opening may be made larger, and the milk be suffered to escape at the artificial aperture whilst the child is sucking; thus imitating the natural relief which the ulcerative process sometimes produces, until the secretion of milk ceases, from the weaning of the child, and from purges to the mother.

In general the Surgeon is consulted in this disease in a few weeks after the birth of the child; but in the following case I did not see it until twelve months after delivery.

Mrs. Reddle, at 38, has a swelling in her right breast, which appeared one month after the birth of her last child; it has now existed twelve months. I opened it with a lancet, and discharged six ounces of white curd mixed with a little yellow serum. The skin was undiscoloured, and her general health good. She had an abscess in the breast in her former pregnancy; she had milk in her breast after delivery; and the child is thirteen months old.

The present swelling began in her last confinement, and it gradually increased until it became the size of an orange, with occasional trifling pain.

Feeling an obscure fluctuation, I discharged a saucer full of milk, like curd or clouted cream: the discharge continued for three days, and then ceased. She attributed the obstruction to a blow.

This disease resembles in its nature the Ranula, excepting in the fluid secreted. The one is an obstruction of the submaxillary duct, and accumulation of saliva. The other is an obstructed lactiferous tube, which is followed by an immense collection of milk, from its escape being prevented at the nipple, owing to the obliteration of the duct at that part.

CHAPTER III.

On the Hydatid Disease of the Breast.

The term Hydatid might be applied to every watery tumour, and it may therefore here with propriety be employed. But it will
Four species be seen in the sequel, that there are four species of these swellings in the breast, three of which are unmalignant, but one is of a malignant nature: and I shall first endeavour to give a description of those which do not possess any malignant tendency.

The first species of this disease exists in the form of simple
Cellulous Hydatids. bags, which contain a serous fluid. I should call them cellulous Hydatids; and the symptoms which they produce are as follow:—

Symptoms. The breast gradually swells, and in the beginning is entirely free from pain or tenderness; it becomes hard, and no fluctuation can then be discovered in it; it continues slowly growing for months, and even for years, sometimes acquiring very considerable magnitude, the largest I have seen having weighed nine pounds; but in other cases, although the bosom was quite filled

with these bags, yet it never exceeded twice the size of the other breast.

At first the swelling feels entirely solid, so that it bears a great resemblance to a simple chronic enlargement of the breast; but after a great length of time, a fluctuation can at one part be discovered in it, and then the breast begins to increase more quickly; and in several parts similar fluctuations can be detected.

The cutaneous veins become varicose; but although the breast is immensely enlarged, it still continues almost entirely free from pain: but to this there are exceptions, for some persons feel an unusual heat, and some, as the breast increases, suffer pain in the part and in the shoulder.

The tumour is extremely moveable upon the pectoral muscle; is very pendulous; and in some cases, the whole of the mammary gland, in others only a small portion of it, becomes involved in the disease.

Ulcerates.

At length one of the fluctuating portions of the breast slowly inflames, ulcerates, and discharges a large quantity of serum, or of a fluid having its general character, but of a consistence somewhat more glary; and the sac being emptied, and the external opening closed, if the fluid be entirely discharged, it is a long time before it reaccumulates; and sometimes the sides of the sac adhere, and the cyst ceases to secrete. In other instances

I have known the swelling break, and discharge a mucilaginous fluid mixed with serum; and several of the cells in succession, and at distant periods, pass through the ulcerative process, and form sinuses, which are very difficult to heal.

Excepting during the process of ulceration, the general health remains entirely undisturbed, and the person suffers so little, either locally or constitutionally, that her friends do not discover her malady; and nothing would lead her to consent to an operation for its removal, but the anxiety of mind, and the apprehension which the idea of a cancer produces, and the great inconvenience and distress which the weight of a large swelling occasions.

Absorbent glands unaffected.

Although the whole breast should be involved in the disease, and even although the swelling ulcerates, discharges largely, and puts on a formidable appearance, and even becomes of the enormous size which will be seen in Plate the second, yet the glands in the axilla remain entirely free from disease; or if one be slightly enlarged, it is from simple irritation only, and it disappears when the complaint in the breast is removed.

Dissection.

When the swelling, and the breast in which it is situated, are examined, it is found, upon a careful dissection, that the interstices of the glandular structure itself, and the tendinous and cellular tissue connecting it, are in a great measure filled with fibrous matter, poured out by a peculiar species of chronic

inflammation; but in some of the interstices a bag is formed, into which a serous or glary, or sometimes a mucous fluid is secreted, according to the degree of inflammation attending it; and this fluid, from its viscidity, and from the solid effusion which surrounds it, as well as from the cyst being a perfect bag, cannot escape into the surrounding tissues; but by its quantity, its pressure, and by the gradual yielding of the bag, it becomes of very considerable size; and vast numbers of these cysts are found to occupy each part of the breast, producing and supporting a continued but slow irritation, and occasioning an effusion of fibrous matter, by which the breast forms an immense tumour, consisting of solid and fluid matter. Within these bags of fluid, Hydatids, hanging by small stalks, but some, which from their appearance I supposed to be simple cells before I opened them, instead of being entirely hollow, had a cellular tissue within them, in which a fluid was collected, which, although it produced the appearance of cells or Hydatids on the outside, within assumed the character of anasarcous swellings.

The breast, when not greatly enlarged, is almost entirely filled with cellulous Hydatids: some are produced in clusters, but the greater number are completely distinct from each other; and in those cases in which the breast is but slightly increased, the constitution is but little irritable, and only a slight adhesive inflammation accompanies it.

The size of these cells varies from the head of a pin to that of a musket-ball, of which an example will be seen in the first Plate; but in the second, some of these bags are emptied, and are seen of a much larger size.

The cyst, in which the fluid is contained, is highly vascular; and so much blood circulates in these tumours, that the veins become greatly dilated, and much blood is often lost during their removal; and there is a disposition in the vessels to bleed after the extirpation of the tumour.

Although in the greater number of cases the whole breast becomes involved in the disease, yet I have several times seen it affect it in one part only; and the removal of portions of the breast has been sufficient to prevent a return of the complaint, as will be seen in Mrs. Hewlett's case, hereafter detailed.

Diagnosis. This disease, in its first stage, resembles simple chronic inflammation; but it may be distinguished from it by the absence of tenderness upon pressure; and the perfect health in which the Simple. patient remains, stamps it to be an entirely local disease.

In its second stage, when it fluctuates, it is discriminated by the Surgeon observing several distinct seats of the fluctuation, and by the absence of tenderness; but the best criterion is the puncture of the bag, when the evacuation of a clear serum, instead of a purulent fluid, at once teaches the Surgeon the true nature of the disease.

From a scirrhous tubercle it may be distinguished by the absence of those occasional acute and darting pains which accompany that malignant affection, by the preservation of health, and by the excessive hardness, which are concomitants of scirrhus.

However, I must observe, that I have seen a case in which a true scirrhous tubercle had Hydatids connected with it, and although the swelling was carefully removed, it returned; but in this case the usual pain of scirrhus accompanied the disease.

With respect to its diagnosis from the fungous tubercle, I must defer that subject to the second part of this Work.

In the treatment of Hydatid disease, no local applications are beneficial, and the constitution requires no attention, because the general health does not suffer from the complaint. Treatment.

If only one bag is discovered, and that is of considerable size, it sometimes, if punctured, does not again fill, as will be seen in several of the cases.

But when the enlargement is excessive—when a multitude of bags are produced—when the weight of the swelling becomes several pounds—when the breast is very pendulous, and drags upon the surrounding parts, and shakes upon every motion—when there is great apprehension, on the part of the patient, of some malignant disease, then the Surgeon will be wise in removing it.

The operation itself is a simple piece of dissection, in which it is the best plan to secure each divided vessel in immediate

succession, to prevent any great loss of blood; but it must be confessed that this is not absolutely necessary, as the operation does not require much time in its performance, and the vessels can be compressed by an assistant, whilst the Surgeon is removing the tumour; or, if he prefer it, each vessel may be secured in a ligature, as the operation proceeds.

When the tumour requires removal for this disease, it is necessary to take away all the hardened and swollen parts of the breast, for they have cysts, or cells, formed in them; and if any cyst be suffered to remain, it will still continue to grow, and the remaining part of the breast to form an Hydatid tumour.

The great solace to the patient in this disease is, that as it does not contaminate other structures, there is no danger of its extending by absorption, of its producing any complaint beyond the breast, or of its affecting other parts of the body; nor have I seen it seated in both breasts at the same time.

Confinement to a single breast.

CASE I.

A young woman was sent into Guy's Hospital many years ago by Mr. Saumarez and Mr. Dixon, Surgeons, at Newington, who had a tumour in her breast about two inches and a half in diameter. The tumour was hard, but her general health per-

fectly good, and I ordered her a plaister, and did no more; and as the swelling underwent little change, she quitted the Hospital.

Many months after, she again applied for admission, the swelling having greatly increased, and I then ordered her into the operating theatre, to remove it; but examining it with great attention, I felt a fluctuation; and turning to the students, said—I shall put a lancet into this swelling, to ascertain the nature of its contents;—which I immediately did, and serum only was discharged. I then introduced a small piece of lint into the orifice; brought on an adhesive inflammation; the sides of the cyst adhered; and the patient did well, having no return of the complaint.

CASE II.

Miss T., a young lady from Ireland, applied to me for a tumour in her right breast. In its centre there was a distinct fluctuation, surrounded by a wall of hardness. I requested her to permit me to put a lancet into the fluctuating part of this swelling, to which she readily consented; and upon my doing so, a quantity of perfectly clear serum (indeed a fluid somewhat less coloured than serum usually is) gushed from the opening. As soon as this fluid had escaped, I applied adhesive plaister, and the wound healed without further application. I have since several times heard from this lady, and learned that the solid tumour remained for a

length of time, and that afterwards she had pain and swelling in her other breast; but by taking alterative medicine, by bathing in the sea, by the application of soothing plaisters upon the part, the swelling disappeared, and the uneasiness ceased, and she is now perfectly recovered, without any further operation.

CASE III.

Mrs. Styles, ætat 28 years, had a tumour in her left breast, which had existed three years, and was sometimes painful from changes of temperature, and sometimes from the approach of menstruation; but the pain was inconsiderable.

It began in a swelling, which was as large as a filbert when first observed, and which was hard and moveable; but it gradually became larger, until it was about two inches in diameter.

Her bowels and the menstrual functions were regular, but she was rather inclined to costiveness; her general health was good. My nephew, Mr. Bransby Cooper, removed the swelling in my presence, and when he cut into the tumour, a bladder of water was opened.

The cyst in which the water was contained, appeared very vascular; the solid tumour, as well as the cyst, were removed, and the wound appeared to be healed in a fortnight; but an abscess afterwards formed, and discharged for six weeks, and then closed.

The tumour was therefore of the nature of a simple cyst, formed in the cellular membrane of the breast, containing a quantity of serous secretion, and surrounded by a solid effusion of fibrine.

CASE IV.

Mrs. Adams, of Charlotte Street, Blackfriars, consulted Dr. Blegborough and myself for an indolent fluctuating tumour in her breast, which had existed three months. It was devoid of pain, the skin was undiscoloured, and it moved freely with the breast. I put a lancet into it, and discharged two ounces of clear serum, and the swelling proved to be quite free from any malignant tendency.

CASE V.

Mrs. B——, ætat 38, a patient of Mr. Haine's, of Hampstead, in the Spring of 1822, discovered a tumour in her breast about the size of a filbert; she had a sense of coldness, with some uneasiness in the part, and occasional tingling down the arm and fingers.

The swelling at first gave the sensation of its being entirely solid.

It was first perceived after her being exposed to a current of air from an open window.

It continued to increase for a year and a half.

Leeches, with mercurial and soap plaisters, were applied without effect.

In July, 1823, finding a fluctuation in the centre of the tumour, I opened it, and a discharge of limpid fluid followed, which after a short period collected again.

A seton was then inserted, and the sac after that time came away nearly whole.

She has never had any return of the tumour; but in damp weather feels now and then uneasiness in that breast.

CASE VI.

Mrs. Hicks, ætat 45, had a tumour in her breast after her lying-in. It was opened by means of a seton, by Mr. Blegborough, and discharged a mucilaginous fluid. In the year 1800 I was consulted by her, when the whole breast was involved in the disease.

She had in it several tumours: some felt like peas, others as large as a marble, some of them had ulcerated, and discharged a mucilaginous fluid, and then healed.

The swelling was sometimes slightly painful, but it was not

the severe darting and burning pain which accompanies the scirrhous tubercle. May 5, 1800, I removed the breast, and upon its dissection found a multitude of cells containing a serous glary fluid.—See Plate 1st.

One cyst was larger than the rest, and the membrane which formed it, was highly vascular. I saw her in 1804, and she had then no return of the disease, but was quite healthy: she had a gland enlarged in each axilla at the time of the operation, which disappeared after it, and never returned.

CASE VII.

The wife of Dr. W——, ætat 45, twenty-six years ago fell in getting into a carriage, and received a blow upon the breast, which immediately became black and uneasy: she applied leeches to it, but a small lump remained. Three years ago the swelling began to increase, and from a rounded form became oblong; it was very moveable, free from pain, and its increase was so gradual, that little alteration was produced in twelve months. At this time the veins began to enlarge, and the skin to be discoloured; yet still it was free from pain. At the end of two years she applied to me, and I ordered leeches, which lessened the veins, but did not diminish the swelling, for it continued to increase, and several blue spots appeared on it; but it preserved a globular

form, and a smooth and even surface: spirituous lotions were applied to it, to check its growth by evaporation.

Two months before the operation, the tumour suddenly increased, and was then supposed to weigh about five pounds:—she was free from pain during the whole progress of the disease; her spirits were good, her activity undiminished, and her constitution remained unaffected, until the last two months, when she said she felt nervous; and head-aches which she had always occasionally had, increased in the progress of the disease. The original lump was for a time distinct in the tumour, but at length blended itself with the general mass. In June, 1818, in the presence of Mr. Cline, I removed this tumour, by making two flaps of the integuments, and I tied the arteries as I proceeded. Little constitutional irritation followed, and in six weeks Mrs. W. was well, and has ever since continued so.

CASE VIII.

June, 1818, Lady Hewitt, ætat 60, tall, and of a strong constitution, dates the origin of the swelling in her breast from a blow she received, November, 1815, in her axilla, by falling against a chair, although she had previously felt some evanescent pains in her right bosom. Nine weeks after the blow, she felt uneasiness in the right breast, which extended into the axilla.

In the beginning of 1816 she discovered a swelling in her right breast, which was about the size of a nutmeg, situated below the nipple. In May, 1816, it had acquired the size of a melon, and she consulted Dr. Sharpe, of Thrapstone, who ordered her what medicines he thought most appropriate to her situation, and sent her to Harrowgate. She applied leeches every day for two months, and afterwards every other day till September. She then determined to try the influence of pressure, which she continued several months by adhesive plaisters, and afterwards by an instrument contrived for the purpose, which was worn during four months, but without any advantage, as the swelling still continued to increase. She therefore determined to leave the case to nature; and she did so till November, 1817, when the swelling began to undergo a change; it increased quickly, and became soft at its upper part, appearing inclined to suppurate: fomentations and poultices were applied, calomel and opium given, but matter did not form. This treatment was continued until the May following, when she discontinued all the means. She then made up her mind to submit to an operation, which I performed on the 10th day of June, 1818, in the presence of Mr. Cline and Mr. Lowdell, and my nephew, Mr. Bransby Cooper.

The swelling was of great size, weighing nine pounds. It was in part solid; in some parts evidently contained a fluid; and

upon the surface of the cyst part there was a slight blue tint. The swelling was moveable, and reached to the upper part of the abdomen. Lady H.'s general health was good.

The first steps of the operation consisted in making a puncture into the tumour at its most prominent part, and discharging a quantity of serum from it; by which it was at once clear the disease was of the Hydatid kind, and the magnitude of the swelling was lessened.

An incision was then made across the tumour, a little above its middle, and the flap of the integuments being raised, the upper part of the swelling was detached from the pectoral muscle, and with the handle of the knife the swelling was further separated; and a flap of skin being left below to meet that at the upper part, the operation was then concluded. Its removal was borne with great fortitude. Two arteries of considerable size required to be secured. The integuments were brought together by a single suture, and by adhesive plaister. On the 16th of June the wound was first dressed, and on the 30th Lady H. was quite well.

CASE IX.

Mrs. Hewlett, residing in Paradise Row, Stockwell, ætat 34, I was requested to visit by Mr. Callaway, on account of a tumour in the left breast.

This was in April, in the year 1822; but four years before, she had discovered the tumour in the breast.

In consequence of hearing of another female who had a swelling in her bosom, she was induced to examine her own, and then found a swelling about the size of a filbert upon the upper part of her breast, which felt extremely hard. She immediately sought the advice of Mr. Scott, of Bromley, who applied plaisters, and gave her some pills: and ten months afterwards she consulted Dr. Elliotson, at Clapham, who advised leeches and medicine.

At a considerable interval, the tumour having increased, she applied to me; but after five months' trial of means which I do not recollect, she consulted Mr. Callaway and Mr. Bransby Cooper, who advised an operation.

From first discovering it, to the period of the operation, it gradually grew larger. At first it was free from pain; but as it became large, a stinging sensation was occasionally felt in it.

It was never tender to the touch; it felt very hard, even to the time of its removal. Her general health was never affected by it, excepting that the fear of cancer sometimes prevented her sleeping, and filled her mind with apprehensions.

She had no children, and never had been pregnant.

The operation was performed in April, 1822, in the presence of Mr. Callaway, and in ten days she was quite recovered.

Ever since that time she has remained free from tumour or pain in the breast; and now, the 18th of November, 1828, she continues perfectly well.

Upon inspection of the tumour, numerous little bags were found, surrounded by fibrous matter. (See Plate).

Only a part of the breast was in this case removed.

CASE X.

Sarah Harris, ætat 30, a single woman, about three months ago, quite by accident, discovered a small swelling in her right breast, about the size of a large marble, situated just under the nipple, deeply seated, but perfectly moveable. She was not led to examine it from any pain, as it gave her none, not even upon considerable pressure. There was no discoloration of the skin, nor any circumstance that gave her the least inconvenience; yet as the tumour continued to increase, she was recommended to have it removed, and was admitted into Guy's Hospital for that purpose.

During the fortnight she was in the Hospital before the operation, the swelling increased rapidly, acquiring the size of an egg; but it was still very moveable, and entirely devoid of pain.

An incision being made through the integuments, a double

tenaculum was passed into the swelling, and it was raised from its bed; in doing which, about half an ounce of fluid escaped, of a clear colourless nature.

The tumour being removed, the parts were brought together by adhesive plaister.

The disease consisted of several small cysts, containing a fluid like that which escaped during the operation; and these cysts were united by a thickened and condensed cellular membrane.

She had no constitutional symptoms from the operation, and the wound healed in a great degree by the adhesive process.

CASE XI.

Ann Harwell, ætat 49, was admitted into Guy's Hospital on the 11th of December, 1810, for an Hydatid disease of the left breast, which began about ten years ago. She was a married woman, had seven children, and has had two miscarriages.

When the last child was put to the breast, she accidentally discovered a tumour, as large as a filbert, immediately under the areola, on the outer side of the nipple, which was tender to the touch, moveable, and the skin over it unattached.

As it projected beyond the nipple, it prevented the child from sucking that breast.

The six children she previously had, she suckled with both breasts.

But almost immediately after she began to suckle with the left breast, pus, mixed with blood, was discharged at the nipple, and continued to do so until within two months of her admission.

From the commencement of the disease, the whole substance of the breast was painful; this was succeeded by an itching and a general heat in the bosom.

She described a sensation as if something were alive and crawling in the breast, which she only felt occasionally.

In May she discovered a considerable number of tumours in the substance of the breast, just beneath the integuments, not painful, but very moveable, and of various sizes. Neither these nor the original tumours by the side of the nipple ever, according to her own account, had any soft or fluctuating feel, but on the contrary were firm and hard, as if solid.

Upon removing the breast, it was found to have numerous cysts in its interior (see Plate), filled with a serous fluid; their sizes very various, some in clusters, but the greater number were single cysts.

In this case there was more pain than is usual in Hydatid tumours, which I attribute to the changes which the breast underwent in its diseased state, from gestation and suckling; as it appears also, from her narrative, that matter had been discharged at the nipple.

CASE XII.

In the following case cellulous Hydatids were united with a scirrhous tubercle, and the lady fell a victim to the disease.

Miss S——, of Canterbury, ætat 29, healthy in appearance and feelings, but of a thin and spare habit, first observed, twelve months ago, a small swelling in the left breast, about the size of a filbert, and her attention was attracted to it by a sense of aching and pressure in the part.

Whenever she had a slight cold, she had a thrilling pain, accompanied with a darting sensation in the part, with a sense of soreness at the nipple.

During the last Summer the swelling increased, accompanied with great tenderness on pressure, and a thrilling pain; and it was more severe as her menstrual period approached. A month ago she observed the tumour to be flat upon its surface, and it felt hard, and the skin did not move easily over it.

November 20, 1822, she came to London, to undergo an operation.

The tumour was very hard, and impressed my mind with the idea of its being a scirrhous tubercle; yet her age, her health, and the fulness of the breasts, still induced a hope that it might not be malignant.

It was obvious, however, that no medicine would absorb or dissolve so large a tumour, and I therefore removed it.

The operation was performed on Saturday, the 23d, and the tumour was deeply buried in the breast. On the Tuesday following she had a rigor, which was succeeded by erisipelas, from which she recovered with difficulty. Upon dissection of the tumour, at its upper part it had the appearance of a scirrhous tubercle; at its lower were found several cellulous Hydatids. (See Plate).

I wrote to her sister to learn the sequel of the case, and her reply was as follows:—

Dear Sir,

In answer to your note which I received this morning, I take the earliest opportunity of informing you that my dear sister had a return of the disease in less than twelve months, and her sufferings were severe, the disease spreading in a distressing manner. August, 1826, was the termination of her sufferings.

I am, your's sincerely, M. A. S.

P. S.—Mr. Rowe can inform you of the circumstances.

I called upon my friend Mr. Rowe, of Burton Crescent, and learned from him that Miss S. had been under his care in 1826, and that she died of a deeply ulcerated cancer.

THE SECOND SPECIES OF HYDATID DISEASE in the breast is of a very curious nature; and without the advantage of the Plate here affixed, taken from a tumour in the breast of Mrs. King, of Charing Cross, it would be utterly impossible to make it understood. The breast was, in this case, enlarged, and in the greater part hardened by the effusion of fibrine (coagulable lymph) in lobes into the cellular tissue; but in several parts it contained bags of serum, and formed fluctuating cysts of various sizes. In each of these cells there hung a cluster of swellings, like polypi, supported by a small stalk; and the little pendulous projections appeared to float in the fluid which had been produced around them in the different cysts. Second Species of Hydatids.

Many Hydatids were found in a detached state, both in the fluid within the bags, and in the solid effusion in the breast; and taking the whole tumour, vast numbers of them had been formed in it. Number.

Their size varied, but the largest did not much exceed that of a barley-corn, the figure of which they assumed. Size.

In general they were of an oval form, or I ought to say oviform, as they were larger at one end than the other. Form.

When opened, they were found to be composed of numerous lamellæ, like the crystalline humour of the eye, or like the layers in the onion, which could be readily peeled from each other. Laminated.

When removed from the breast, they had a pearly appearance, and the laminated character of pearl internally.

Cyst. The cyst in which they were contained was a perfect bag, and it was composed internally of a membrane which was highly vascular, like other secreting surfaces; and the solid part surrounding the cyst had a greater number of vessels near the bag than at a remote distance from it; but the whole of the diseased structure was endowed with great vascularity, as will be seen in the Plate.

Single Hydatids and Clusters. Upon examining Plate the 4th, seven of these bags will be seen with clusters of pendulous tumours growing in them, connected by the stalks, which are delineated in Plate the 3d, and which contains sections from the same breast. Single Hydatids will be seen in the diseased solid structure, as well as cells containing a number of these bodies; and in one the cell is emptied, to shew its vascularity.

Their nature. It is doubtful if these structures are not of the nature of globular Hydatids (which is the next I shall describe), and which have perished from the pressure of the solid matter with which they are surrounded; or whether they are productions, or secretions of the arteries of the part: but the determination of this point must be left to future observation and diagnosis.

Sections of Hydatids are seen, and several single Hydatids, and the extreme vascularity of the fibrine with which they are surrounded, is well exhibited in the Plate.

In its external character this disease resembles the first which I have described; and the absence of tenderness being the same in both, it will be thus distinguished from the simple chronic disease of the breast; but in the present state of our knowledge, it cannot be discriminated from the former Hydatid disease but by dissection. Diagnosis.

From the scirrhous tubercle it is known by the hardness, by the occasional severe pain, and by the broken health which usually attends that disease: for although in the case from which I have given the description of this complaint, the tumour weighed 13 lbs. upon its removal; yet the general health was good, the absorbent glands in the axilla were unaffected, and there was no local disease in any part of the body.

It may be also observed, that scirrhous tumours very rarely acquire so great a magnitude as the Hydatid swelling here produced.

Many years elapsed before the disease required removal, from its magnitude and inconvenience. In Mrs. King's case it had existed fourteen years at the time of the operation. Extirpation is the only mode of relief; for no constitutional remedy can be ever found to check the progress of the disease, and no local application can be attended with advantage. A puncture into the cyst could only afford temporary relief; but its removal by operation is free from danger at the moment, and the patient's mind may be divested of all apprehension for the future. Extirpation.

Case. Mrs. King, of Charing Cross, ætat 58, had an enormous enlargement of her left breast, which she first discovered fourteen years ago, and then supposed it arose from a blow. When she first observed it, its size was that of a marble; it felt hard, and was unattended with pain.

It appeared to be buried in the substance of the breast, and was not very moveable in the glandular structure. It increased gradually until two years ago, by which time it had acquired the size of a melon. At that period it seemed to increase suddenly, and to grow faster than before; but it was still unattended with pain, and her general health did not appear to suffer.

Last Christmas it again suddenly increased; but was still devoid of any painful sensations, excepting that sometimes when she had a cold, she felt a slight uneasiness in the part.

On the 30th of September, 1822, I first saw her, and the tumour then measured thirty-five inches in circumference: in the greater part it was solid, but in other parts it was soft and fluctuating, and one bag evidently contained a large quantity of fluid.

The solid portion of the tumour was placed at its upper part; the fluid occupied the lower part of the swelling. Her general health was good, but she suffered much from its weight drawing down the skin and pectoral muscle, and putting the nerves exceedingly upon the stretch.

On the 1st of October I removed the tumour in the presence of Mr. Key, of Guy's Hospital, and Mr. Laviss, a Surgeon in Westminster.

The large vessels, divided in the operation, were immediately secured, or compressed by an assistant as soon as divided, so as to prevent any loss of blood in the operation.

The wound, when dressed on the seventh day, appeared healthy. The irritative fever consequent upon the operation was very slight, and she recovered without any untoward circumstances.

Third Species.

THE THIRD SPECIES OF HYDATID which is found in the breast, is the animal, or globular, and which consists of a bag containing a fluid, which has no vascular connection with the surrounding parts; and it produces within its interior a multitude of bags similar to itself.

Liver.

They are often met with in great numbers in the liver, and have been frequently seen in the lower part of the abdomen, between the bladder and rectum, where they have been the cause of retention of urine.

Omentum.

The omentum also sometimes forms a nidus for them, of which my friend Dr. Farre has a beautiful specimen.

Ovarian.

In some species of ovarian enlargement they are also found.

Lungs.

A specimen of diseased lung was met with by Sir L. M^cLean, of Sudbury, in which its interior was entirely occupied by these

productions; and they have been found hanging in the inner side of the pericardium.

Brain. In the human brain they sometimes, although rarely, exist; but in that of other animals they are frequently found.

Cellular membrane. Tumours also form in the cellular membrane, which, when opened, discharge a multitude of these bags, which are enclosed in a cyst formed by the adhesive process.

Suppurate. They sometimes produce suppuration and ulceration, and are thus discharged.

Upon dissection of the Hydatid, the following appearances present themselves.

Dissection. The Hydatid is contained in a cyst, formed in the breast by the adhesive process; for wherever it is deposited, it excites irritation, and becomes surrounded and encased by an effusion of fibrine which is highly vascular; and its internal and secreting surface is directly applied to that of the Hydatid, and a slight moisture exists between them, they having no vascular connection.

Single. In the breast I have only seen them exist singly, but in other parts of the body great numbers are found.

Semi-transparent. It is a semi-diaphanous bag filled by a clear water, and it is uniformly smooth on its external surface.

No mouth. It has no opening or inlet, so that it must derive its nourishment by absorption from its external surface. It is composed of

two coats; the external is of considerable density, and if any opaque body be placed behind it, it has the shining appearance of mother of pearl, and reflects the rays of light from its surface.

Elastic.

It possesses a considerable share of elasticity, and rolls itself up when it is broken.

Uterine membrane.

This external layer is lined by a very delicate internal membrane, which appears to be its uterus; for from its interior a multitude of small Hydatids grow, which at first adhere to the membrane, but afterwards become detached, from its falling into the fluid which the Hydatid contains.

Small Hydatids.

If, therefore, the fluid contents of the Hydatid be collected in a glass, an immense number of small Hydatids will be discovered floating in them.

Become parent Hydatids.

Each of these small bags becomes in its turn a parent Hydatid, producing young upon its internal surface, in a similar manner to the parent cyst.

Are they animals?

I am induced to believe them to be distinct animals; first, because they have an existence and growth of their own, having no vascular connection with the part in which they are found, but being only encased and surrounded by a vascular and secreting cyst.

Secondly, because they have the power of producing upon their interior surface their own species.

Thirdly, that in the brain of sheep a similar bag is found,

which, for several hours after the sheep has been killed, if it be put into warm water, has a distinct and very considerable vermicular motion: and, fourthly, because on the surface of the abdominal viscera, and sometimes in their interior, an Hydatid is found with a mouth and neck added to it; and consequently receives its food through the mouth, like other animals.

The globular Hydatid, therefore, may be considered, as to its mode of nourishment, the link in the creation between the animal and vegetable, as it receives its nutriment by absorption as the vegetable does; but the tænia hydetigina, as it is called, which has a mouth, is a perfect animal, with respect to the manner of its nutrition.

Nourished by absorption.

Its deposition.

The Hydatid is supposed to be deposited in the structure in which it grows, carried there by the blood. Into whatever part it is thrown, it excites irritation, and becomes enclosed by an adhesive process, and which forms the cyst in which it is enveloped; but their origin is obscure, and the opinions respecting their deposition hypothetical.

Their nutrition.

The parent Hydatid is supported by a secretion from the internal surface of the cyst in which it is found; but the small Hydatids in it are probably nourished by the fluid which the parent Hydatid contains, so soon as they drop from, and cease to be connected with the parent cyst.

When one of these Hydatids is produced in the breast, an

inflammation is excited by it, and a wall of fibrine surrounds it; it feels hard, and from the small size of the Hydatid a fluctuation cannot be discovered; but as the Hydatid grows, although the quantity of solid matter increases, yet as the fluid in the Hydatid becomes more abundant, a fluctuation in the centre of the tumour may be ultimately perceived.

Sometimes, when the Hydatid has considerably enlarged, it produces a suppurative inflammation; and when the matter is discharged, either by the lancet or by ulceration, the Hydatid escapes at the opening; and there is in the collection of preparations at St. Thomas's Hospital, an Hydatid which was thus discharged by ulceration from an abscess in the breast. Ulceration.

The proper treatment of these Hydatid tumours is to make an incision in them, and to discharge the bag, after which a simple poultice will be sufficient to heal the wound; or if they be punctured, and the fluid be discharged, and it then reaccumulates, a seton may be passed into it, and the sac will slough. Treatment. Incision. Seton.

But when the fluctuation escapes observation, and the tumour is believed to be of a scirrhous nature, the Surgeon removes it, and discovers the Hydatid bag contained within; and he can then confidently assure the patient that she is perfectly free from any future danger. No future danger.

The distinguishing marks of this disease are its central fluctu- Diagnosis.

ation, its solid circumference, and the absence of tenderness upon pressure.

The disease is neither dangerous prior to the operation, nor is it followed by any ill consequences.

For the following case I am indebted to Mr. Bayfield, Surgeon; and the Plate which I have given, after having dissected the swelling with care, is an excellent specimen of this disease.

Mrs. Sarah Cornish, ætat 44, was afflicted with a swelling in
Case. her left breast, which, when she first observed it, was of the size of a filbert. It gradually increased in size for eleven months, but was entirely free from pain; and her general health remained good, and menstruation perfectly regular.

From the time of the operation for its removal, which was performed several years ago, to the present period, the breast has remained free from pain or disease. (See Plate 5th).

Mrs. B., a patient of Mr. Haines, of Hampstead, whose case
Case. I have already related (see Case 5th) under the first species of Hydatid, probably had a globular Hydatid; because, when a seton was made in it, the cyst died and sloughed, instead of adhering, as it would have done, had it been a cellulous Hydatid.

CHAPTER IV.

On the Chronic Mammary Tumour.

Age.

This disease generally attacks young persons from the age of seventeen to thirty years, although I have known it occur after that period, but very rarely.

Healthy Persons.

The constitution is often, although not always, perfectly healthy in those who are subject to this disease; nor does it usually in its turn affect the constitution, either in its progress or in its termination.

Cause.

It is, I believe, generally the result of the sympathetic influence of the uterus, the excitement of the one organ leading to an increased determination and action in the other, and thus a new growth is produced; and it occurs chiefly in single women, or in the married who have had no children.

Symptoms.

The symptoms which accompany this swelling are, that it grows from the surface of the breast rather than from its interior, and it therefore generally appears to be very superficial, except-

ing if it spring from the posterior surface of the breast, when it is deep-seated, and its peculiar features are less easily discriminated.

Very moveable.

It is an extremely moveable swelling, being chiefly attached by a portion of tendinous aponeurosis to the glandular structure of the breast, rather than buried within the gland; and therefore when moved, it glides over the surface of the breast.

Little painful.

It begins without pain, and is therefore accidentally observed in the patient's ablutions; and it often continues for many years without exciting pain, or producing inconvenience; but in some cases it does become painful; the uneasy sensation extends to the shoulder, and the patient describes it to be of an aching or rheumatic kind.

Not tender generally.

Generally it is not tender to the touch; but I have known it occasionally so, more especially before the patient is unwell at her monthly periods.

Growth slow

Its growth is extremely slow, for I have removed one which had existed for five years, and which was not larger than a walnut; and I have seen another which had been growing seven years, and was but little larger than the former.

Size.

They rarely acquire any considerable magnitude, usually weighing from one to four ounces; but one which was removed by Mr. Bond, of Brighton, weighed one pound and a half, and was only two years in acquiring that unusual size. There was

a case in Guy's Hospital, and I believe it to have been of the same nature, which weighed several pounds, and which had ulcerated at its most prominent part, producing granulations which discharged purulent matter; but such cases are extremely rare, although tumours of smaller size, and of this description, are very frequent.

Unmalignant.

They are entirely free from malignancy, having nothing in common with cancer or fungus in their character: they therefore exist for many years almost in a stationary state, and then disappear, the patient observing them to gradually diminish.

I have known a gland enlarged in the axilla during the continuance of this tumour; but it is the result of simple irritation, is a rare occurrence, and does not proceed to the production of any formidable complaint.

Manipular examination

Upon a nice manipular examination of this swelling, it is found to be lobulated—that is, composed of a number of lobes connected together, but leaving depressions between them; and whatever size it may obtain, it still preserves this conglomerate character: the swelling might therefore very properly receive the name of the lobulated mammary tumour.

Dissection.

Upon a careful examination of this disease by dissection, it is found to be contained in a bag formed of a similar fibro tendinous structure to that which envelopes, as well as occupies the interstices of the glandular part of the breast; and in proportion

to the magnitude of the tumour does this envelope become more and more distinct. It grows from the glandular structure of the breast, and remains connected with it by a thin process of a similar structure, which is sufficiently loose and moveable to allow of a very free motion of the tumour upon the breast.

Lobulated. When first laid bare, it appears to be composed of large lobes, like those of the breast; but when more completely unravelled, it is found to be formed of smaller and smaller lobes, similar in form, but differing in magnitude; and after a short maceration in water, the lobes are easily separated.

The impression made upon the mind during the dissection of the tumour is, that nature has formed an additional portion of breast, composed of similar lobes, but perhaps differing in structure in the absence of lactiferous tubes. When first opened, they appear red in the circumference, but whiter in the interior.

Diagnosis. The general discriminating marks of this disease are as follow:

Youth. First, the youth of the patient: there are, however, some exceptions to this rule; but as the scirrhous tubercle is rarely seen under thirty years of age, so does this disease seldom happen after thirty.

Little pain. Secondly, the absence of pain; but this also is not constantly observed, although it is generally slight, and often the swelling exists many years without it.

Health. Thirdly, from the malignant diseases of the breast it is distin-

guished by the general health in this complaint remaining unaffected.

Fourthly, the slow progress of the swelling, and the number of years it will exist in almost a stationary state. Slow progress.

Fifthly, in its superficial situation upon the surface of the breast; for it is placed rather on the gland than in it. Superficial.

Sixthly, from its extreme mobility. Mobility.

Seventhly, above all, it is known from its lobulated feel; being distinctly composed of numerous lobes conglomerated into one mass, with a broken or divided surface.

The cause of this disease is, as I have stated it to be, sympathetic with the uterus, and it arises from a great determination of blood to the part at certain times; but patients frequently ascribe it to a blow which they recollect to have received, or to the continued pressure of stays; and these circumstances of irritation may become the immediate exciting causes of the tumour, but the tendency to the disease is founded in uterine excitement. Cause.

In the treatment of this complaint, it is right to learn if all the secretions be perfectly performed—if the liver secrete its proper quantity of bile—if the bowels be costive; but, above all, if the menstrual secretion be regularly performed, as regards its time, its quantity, its colour, and its duration. Treatment. Constitutional.

If the digestive functions are imperfectly performed, the Pil. Hyd. Sub. Comp. at night, and the Infus. Calumbæ cum Infus.

Rhei. et Soda Carbon. twice in the day, will be the best medicine; but if the uterine secretion be defective, the Pil. Hydrargyri. gr. ij. Extr. Colocynthidis Compositi, gr. iij. Ft. Pilula, given every fourth or fifth night, with different preparations of Steel, to be taken two or three times per diem, will be the more appropriate constitutional remedies.

Local. As to local applications, one of the best is the Emp. Amm. cum Hydrargyro, if the diseased part be completely indolent; or the Iodine Ointment may be applied by friction upon the swelling, to excite the action of the absorbent vessels.

But if there be heat or pain in the swelling, evaporating lotions, or simple poultices, are most productive of relief.

It must be confessed, however, that these swellings are much out of the medical man's power to relieve, either by constitutional or local means; for as they are growths of long continuance, so will a great length of time be required to produce their absorption; and when they disappear, they seem to do so very gradually, from the cessation of that uterine excitement by which they have been produced, or by the part being called upon for its natural secretion of milk.

Surgeon's opinion. But when the patient consults the Surgeon, she is very apprehensive of a cancerous or malignant disposition in the tumour; and he has the power of relieving her mind by the following declarations, which time will verify.

First, that the disease is decidedly not malignant; and therefore if it do not yield to treatment, it is not dangerous to life. Unmalignant.

Secondly, that it does not absolutely require an operation; for it will continue for years, and then gradually disappear. Does not absolutely require operation.

Thirdly, if the patient be anxious to have the malady removed, from an apprehension of its becoming malignant, and if she determine to have it done, the operation is of the simplest kind; and it is not followed by any serious symptom, immediately or remotely; nor is the disease liable to recur. Operation simple.

Single women who have this species of tumour, enquire of the Surgeon if they may marry; and my reply to this query is, that the swelling, so far from forbidding marriage, seldom fails to disappear under the first pregnancy, and the suckling which succeeds it. But it is right that the future husband be informed of the complaint, and then he will be anxious that an opinion should be had on the subject. I knew a lady who had one of these swellings, and who was engaged to be married, and she candidly told her future husband of her misfortune. A Surgeon was consulted, who said—"Marriage will be your best cure; the tumour will not resist pregnancy, and the process of nursing the child at your bosom:" and so it happened, for the tumour disappeared not in the pregnancy, but in the suckling. Marriage.

I shall subjoin the following cases of this disease, from notes which I made at the time of my being consulted; and I have a Cases.

great number of them; but from their similarity, and the few circumstances attending them, the relation of a few of them will suffice.

CASE I.

Miss M——, aged 27, had a small tumour in her breast, which was seated very superficially, was very moveable, and was lobulated upon its surface. She had a similar tumour removed five years ago by Mr. Cline. Each of the tumours was devoid of pain; but it produced great anxiety of mind, from the apprehension of its becoming cancerous, and she therefore solicited its removal. Mr. Pennington held the tumour between his fingers, and I divided the skin over it, drew it forth with the double tenaculum, and easily removed it with a small portion of the breast. Upon examination of the swelling, it appeared lobulated like the breast itself, to the surface of which it was attached by a tendinous aponeurosis, and by a small portion of the breast.

CASE II.

Mrs. G——, a lady in the City, had a lobulated mammary tumour, which began two years before I removed it, which was fourteen years ago. She had children, but was unable to suckle

in the breast in which this tumour began. She remains well up to this time, and has had two children since. She was induced to have the tumour removed, because it produced a sense of contraction in the arm, and the tumour itself was sometimes painful.

CASE III.

Mrs. A—— has had a swelling of this kind in her breast for two years, and it remains stationary. Her sister had formerly a similar swelling in her breast, which gradually lessened by her taking the Pil. Hyd. Sub. Comp., and by wearing the Emplastrum Ammoniaci cum Hydrargyro.

CASE IV.

Mrs. G——, of Lynn, applied to me for a swelling, the size of a walnut, in her breast; it was situated close to the nipple, was very superficial, and very moveable; it felt lobulated, or composed of portions conglomerated together. I removed it, and found it to be formed of lobes divisible into smaller.

CASE V.

Miss B—— had a lobulated tumour in her breast. I ordered her Cascarilla, Rhubarb, and Soda: she got quite well.

CASE VI.

Mrs. E——, of St. Paul's Church Yard, had a moveable, superficial, and lobulated tumour of the breast. When she first consulted me, she had an intention of marrying, but doubted the propriety of doing so, on account of this disease. She therefore, through her mother, mentioned it to the gentleman who was to be her future husband, and he brought her for my advice. I told him I had not witnessed these swellings continue after pregnancy, and that the disease was not of a malignant nature. She married, and the swelling disappeared in the suckling of her first child: her age was twenty-two.

CASE VII.

The following case I received from Mr. Bond, Surgeon, of Brighton.

Dear Sir,

I deferred acknowledging the receipt of your letter until I could give a more decided answer to your questions. The lady at the time of the operation was 42 years of age. The tumour had existed only two years from its first appearance until it was removed. Through its progress she seldom felt pain, unless

it was much handled or pressed. It was hard and unequal. Sir Charles Blicke thought it of a malignant nature, and advised its removal. The left breast was quite sound, and the glands in the axilla were free from disease. The operation proved highly successful, the parts healing by the first intention; and although it is ten years since the operation, the lady has been, and is now, in perfect health. The tumour, when removed, weighed one pound and a half. The patient was married; but although healthy, never had any children.

Believe me, your's truly,

A. Bond.

Brighton, Feb. 19, 1823.

CASE VIII.

Elizabeth Miller, aged 33, has a lobulated tumour in her right breast: it is of seven years' duration, and began in a swelling not larger than a pea, and is now the size of a walnut. She has been married sixteen years, and has had one child. The swelling feels distinctly lobulated, and the interstices between the lobes may be easily traced. For five years she had no pain in it, nor did she suffer any inconvenience from it; but lately it has been tender to the touch, and she has had pain in it which extends to the shoulder, and was worse before she was unwell. She is weak in her general health. Her monthly periods are

regular, but she is subject to costiveness and head-aches. She has been under the care of Mr. Callaway, who has tried various means for the dispersion of the tumour.

CASE IX.

Miss Gardner, aged 34, had a chronic mammary tumour in the right breast. In April 1828 she first observed a moveable swelling, devoid of pain, seated at the upper part of the breast. It gradually increased, and similar tumours grew out of the external portions of the breast towards the arm; but they were small, and not very distinct.

She has always had a scanty menstruation, and has a slight fluor albus.

She has also suffered much anxiety and disappointment.

Nothing which she has tried has been useful.

Leeches appeared rather to increase it than to have any beneficial effect.

The tumour was removed by operation on December 4, 1828.

Upon dissection, it was found enclosed in a cyst of condensed cellular membrane; and the swelling was composed of a substance which resembled the breast itself, and was connected by a stalk to the mammary gland.

December 15—The wound is healed.

CASE X.

Miss Golden, from whom I removed a chronic mammary tumour in 1814, had an enlarged ovarium appear a few months afterwards on the right side. She consulted me for a disease in her arm in the Summer of 1828, and I found that the disease in the ovarium had disappeared, and that the complaint in her breast had not returned.

Although these tumours are not in their commencement malignant, and they continue for many years free from the disposition to become so, yet if they remain until the period of the cessation of menstruation, they sometimes assume a new and malignant action.

CHAPTER V.

Of the Cartilaginous and Ossific Tumour.

In chronic and specific inflammations of parts of the breast, a gelatine is sometimes effused, which resembles that which supplies the place of bones in the fœtus, and of parts of the bones in infants. This gelatine becomes vascular from the surrounding parts. It resembles cartilage in its yellow whiteness, in its compactness, and its elasticity, and still more in its becoming the nidus of bone; for as the blood-vessels and absorbents enter it, the latter remove portions of it; whilst the former deposit in the interstices produced by the absorbents, the more solid material of bone, *viz.* the phosphate of lime; and when the tumours composed of this structure are steeped in an acid, the phosphate of lime is removed, but the cartilaginous or gelatinous basis remains. This will be illustrated in the following case:—

Gelatine effused.

Vascularity.

Bone.

Mary Farmer, aged 32 years, applied to me for a swelling in her breast, which she had observed for fourteen years.

The pain in it was very severe; the skin which covered it felt very warm when compared with the surrounding parts; and it required the constant application of evaporating lotions to moderate its warmth. The tumour was excessively hard, very painful before menstruation, but greatly relieved after it.

Various applications were tried, *viz.* fomentations, poultices, and stimulating plaisters, but they neither disposed it to absorption nor to suppuration; and as all the means employed to disperse it were quite unavailing, she was anxious for its removal.

The glands in the axilla being free from disease, as the complaint had existed for so long a period, and her general health seemed to be perfectly good, I recommended the operation, as affording the only hope of cure.

Upon examination of the swelling after its removal, the larger portion of it had the appearance of that cartilage which supplies the place of bone in the young subject: the remaining part was ossific.—See Plate.

CHAPTER VI.

Of the Adipose Tumour.

Operation for it.

I have on two occasions been required to perform operations for the removal of adipose tumours in this organ; and in each case the swelling had acquired a very considerable magnitude.

Grew posteriorly.

In the first case it began at the posterior part of the breast, and grew between the gland and the surface of the pectoral muscle. In the second all those lobes of fat which are interspersed between the different portions of the mammary gland, and which serve naturally to augment the size of the bosom, and to increase its prominence, became enlarged, and formed a swelling which, prior to the incision being made, seemed to involve the whole of the glandular structure of the breast; but when the operation was performed, the different lobes of adeps which formed the tumour, could be drawn away from the gland itself.

Interstitial.

The following cases are those to which I have alluded.

CASE I.

Mrs. Smith, of Great Yarmouth, Norfolk, was admitted into Guy's Hospital in August 1805, for an enormous tumour in the left breast: its circumference was thirty-one inches, and its length ten inches and a half. It was removed August the 29th, by making, first, a semicircular incision at the anterior and upper part of the tumour, and then drawing down the swelling; an incision was made along its upper part until the pectoralis muscle was exposed, from which the tumour was afterwards dissected from the upper to the lower part, its own weight drawing the cellular membrane to great extent, so as to render its detachment easy. As the different vessels which supplied it were cut through, the fingers of an assistant were applied upon them, and very little blood was lost in the operation; but in order to complete it, a very large portion of integument, the whole of the breast, and the tumour which was situated behind it, were removed. Several sutures were used to approximate the edges of the skin, which were also brought together by means of adhesive plaister; and the patient soon recovered.

The tumour, which is preserved in the collection at St. Thomas's Hospital, weighed 14 lbs. 10 ounces.

CASE II.

A woman of the name of Martin, was admitted into Guy's Hospital for a tumour in her breast, which was of great size, and felt as if it were composed of an increase of the different lobes which composed the glandular structure of the breast. But upon making an incision for its removal, it was found that all the different lobes of fat which enter into the composition of the breast, had become enlarged, and that the glandular structure itself was free from disease.

The different branches of which the swelling was composed, were drawn out from between the different portions of the gland, so as to leave large cells, in which the tumour had been contained. An extensive simple incision was sufficient to expose the surface of the swelling; and then, by drawing it towards me, I elongated the cellular connection which it had with the breast, and easily drew out the tumour, with very little dissection.

I have lately had a letter from this person, in consequence of some enquiry I made as to her present state, and her reply is, "that there never has been any return of the disease, and that the breast is entirely free from pain."

CHAPTER VII.

On the large and pendulous Breast.

The glandular structure of the breast sometimes grows to an enormous size, and becomes extremely pendulous, so as to reach to the fore part of the abdomen; but this is to be understood as not to be the effect of relaxation, but to be an absolute growth of the secreting lobes, which can be distinctly felt to be enlarged and hardened, and are sometimes accompanied with a considerable degree of tenderness.

A Growth of the Breast.

A girl, whose age, the last time she was under my care, was 23, had frequently asked my advice for this kind of increase of each bosom. Her general appearance was healthy, and she seemed rather disposed to corpulency; but her constitution was defective, in her menstruation being irregular, in its colour being pale, and in its quantity being much less than natural.

But the most remarkable case of this kind which I have witnessed, was sent to Dr. Babington and myself from Pembrokeshire, and the young lady brought me the following letter:—

Haverfordwest, Nov. 5, 1821.

Sir,

I am induced to request your advice in the case of Miss ——, who about three years ago was first affected with an enlargement of the left mamma, which continued increasing; and the right breast then began also to enlarge, until they attained their present dimensions. She is now fifteen years of age, and of good general health: the catamenia appeared about twelve months ago. I was requested to see her last winter, in company with Mr. Gregory, of Milford, and she has taken various emenagoge medicines and gentle laxatives; and she was enjoined regular exercise and sea-bathing. The catamenia returned at three or four regular intervals, at which time the mammæ considerably decreased in size; but since May last, the periods have been very distant, and the discharge is very small in quantity.

The mammæ are now of extraordinary dimensions. The circumference of the left is twenty-three inches and a half, that of the right is twenty-two inches, and they are pendant like a pear, as the neck is comparatively narrow. I cannot perceive any tumour, either in the breast or in the axilla. The skin feels and appears to be natural. Her appetite is good, and the bowels are kept regular by occasional doses of neutral salts. She suffers no pain whatever in either mamma, but she does not appear so lively as girls of her age, but indeed, on the contrary,

is heavy and dull. In other respects there is nothing peculiar in this young lady's case.

I am, Sir, your obedient servant,

W. D. Jones.

The local treatment of this case consists in the application of a suspensory bandage from the back of the neck, under each breast, to produce artificial support; and the principle which is to be observed in the constitutional treatment of this malady, is to increase and to support the menstrual secretion; and for this purpose the exhibition of different forms of Steel united with Aloes, will be found the most efficacious medicine. Treatment.

The Ferrum Ammoniatum—the Mistura Ferri Composita—the Carbonate of Iron, will be the forms of Steel which, united with Aloes, will be most beneficial; and if the biliary secretions be defective, the Pil. Hyd. Sub. Comp., or the Hyd. cum Creta, will be the best medicines.

Women who have led a life of celibacy to the age of thirty or thirty-five years, and whose menstrual secretion has become extremely defective, and who are the subjects of a severe fluor albus, are liable to have a change produced in their breasts:—they become enlarged, but not pendulous; and upon careful manipular examination, each lobe of the gland can be distinctly Altered glandular structure.

Hardened. felt enlarged and hardened, moving freely upon each other: both breasts are affected, but generally one more than the other, accompanied with occasional pain, more especially just prior to the period of menstruation, which discharge is very slight, pale in colour, and of short continuance. In cold weather, if the breast be at all exposed, the pain is augmented; and in these cases cold has a great influence in lessening the menstrual secretion, already exceedingly diminished.

An absorbent gland is sometimes enlarged in each axilla; but this arises from simple irritation, and is not to excite any apprehension of malignancy.

The breast, after having been some time enlarged, begins to waste; and in a few years it is in a great degree absorbed.

This complaint consists of a change in the secreting portion of the breast, by which it is converted into a much more solid structure than natural, and in which its secreting power appears to be in a great degree destroyed. The breast is to the feel composed of a great number of moveable, very solid, but connected portions.

The treatment of this case consists in restoring, if possible, the menstrual secretion by the means already alluded to, and by the use of the warm hip-bath; and locally in applying leeches when there is pain, and desiring the patient to wear the Emplastrum Ammoniaci cum Hydrargyro.

CHAPTER VIII.

On the Scrofulous Swelling of the Breast.

In young women, who have enlargement of the cervical absorbent glands, I have sometimes, though rarely, seen tumours of a scrofulous nature form in their bosoms, confined in most cases to a single tumour in one breast; but in one case, two existed in one breast, and one in the other. Symptoms.

They are entirely unattended with pain, are distinctly circumscribed, are very smooth on their surfaces, and scarcely tender to pressure.

They are very indolent, and vary with the state of the constitution, diminishing as it improves, and increasing as the general health is deteriorating.

They can only be distinguished from the simple chronic inflammation of the breast by the absence of tenderness, and by the existence of other diseases of a similar kind in the absorbent glands of other parts of the body. Diagnosis.

They produce no dangerous effects, and do not degenerate into malignancy.

They do not require an operation; and indeed it would not be justifiable to remove them by the knife.

Dissection. But I have seen them removed, from an error in judgment respecting their nature; and when cut into after their extirpation, they are found to be composed of a loose and curdly fibrine, very unequally organized.—See Plate.

In some parts they possess vascularity, but in others are incapable of supporting vessels; in some parts, therefore, they are streaked with blood—in others appear of a yellowish white, approaching to the colour of suppuration, although still remaining solid.

Treatment. The treatment in this case consists in improving the constitution by a warm and dry atmosphere—by an equally regulated temperature—by tepid sea-bathing—by gentle and regular exercise—by animal food of the most digestible kind—by milk—and by a farinaceous diet—a diet which shall nourish without exciting feverish heat, or calling much upon the powers of digestion.

The best medicines are Carbonate of Iron and Rhubarb; the Hyd. cum Creta with Rhubarb; a grain of blue Pill, and two or three grains of Quinine; Infusion of Calumbæ with Rhubarb and Soda; for I conclude it will be admitted by every one who deserves the title of a Surgeon, that we possess no specific remedy for this disease, but that we are required to assist the digestive

powers, make better blood, and convey it to the system by an increased vigour of the constitution.

Local treatment avails but little: a stimulating plaister or a lotion to the tumour, when the health is improved, may excite the absorbents to remove it.

CHAPTER IX.

Of the Irritable Tumour of the Breast.

Irritable state of the Breast.

The breast is liable to become irritable without any distinct or perceptible swelling, as well as to form an irritable tumour, composed of a structure unlike that of the gland itself, and which therefore appears to be of a specific growth.

Age.

Both states of disease, in the greatest number of examples, occur in young persons from the age of sixteen to thirty years: I have never witnessed it prior to the commencement of puberty, but I have sometimes known it to occur at a later period of life than that which I have mentioned.

Little Swelling.

When the complaint affects the glandular structure of the breast, there is scarcely any perceptible swelling, but one or more of its lobes becomes exquisitely tender to the touch; and if it be handled, the pain sometimes continues for several hours. The uneasy sensation is not confined to the breast alone, but it extends to the shoulder and axilla, to the inner side of the elbow,

and to the fingers; it also affects that side of the body even to the hip; the patients cannot sleep on that side, and the pain is sometimes so severe as to prevent even their resting on the diseased side; and the weight of the breast in bed in some instances occasions intolerable pain.

Excessively painful.

Patients also state that heat and cold frequently succeed each other in the breast; and it would seem the pain resembles that in the Tic-douloureux, darting like electricity through the part, and through the neighbouring nerves. When the pain is most severe, the stomach sympathizes, and vomiting is produced. The suffering is very much increased prior to menstruation; is somewhat relieved during the period, and decreased after its cessation. There is no external mark of inflammation, as the skin remains undiscoloured.

In some cases only a small portion of one breast is affected; in others the whole, and not unfrequently both of the breasts.

Part of the Breast, or the whole.

This painful state remains for months, and even for years, with little intermission; but it has no malignant tendency: and an operation, where there is no distinct tumour, must be entirely out of contemplation.

Duration.

Besides this irritable and painful state of a whole, or part of the breast, a tumour sometimes is found distinctly circumscribed —highly sensitive to the touch—acutely painful at intervals, more especially prior to menstruation—very moveable—often not larger

Irritable tumour.

Size. than a pea, seldom exceeding the size of a marble: generally one only exists, but in other cases there are several similar swellings.

Although they continue for years, they vary but little in size.

Disappear. I have never seen them suppurate: they sometimes spontaneously cease to be painful, and sometimes disappear without any obvious cause.

Dissection. Upon dissection, they are found to be composed of a solid and semi-transparent substance, with fibres interwoven in it, but without any regular distribution; and I have not been able to trace any large filiment of a nerve into them. They seem to be productions of the cellular membrane of the part, rather than of the glandular structure; and they are therefore met with in the cellular membrane of other parts of the body, accompanied with similar painful sensations; of which in the following pages I have given an example.

The diagnosis of this disease is unattended with difficulty; for the pain with which it is accompanied—its tenderness to the slightest touch, or to pressure of any kind—the suffering which succeeds examination—distinguish it from the Hydatid, the chronic mammary tumour, and the scirrhous and fungous tubercle.

If it be liable to be confounded with either of these, it is the chronic mammary tumour, which sometimes becomes very irritable and sensitive under changes of the constitution.

This disease is met with in persons of an irritable and nervous

temperament, in whom there is excessive excitability of the system, accompanied with diminished power.

The menstrual secretion is generally very deficient; but in some cases I have known it morbidly abundant, and have very seldom seen an example in which it was in all respects regular or healthy.

The fluor albus is also a frequent concomitant of this complaint.

The immediate or exciting cause is generally believed by the patient to be a blow, or pressure from some part of the dress.

The treatment of this disease consists in lessening the irritability of the system, in lulling the local suffering, and restoring the defective or diminished menstruation.

The best local remedy is to be found in the application of a plaister, of equal parts of Soap Cerate and Extract of Belladonna, or a poultice with Solution of Belladonna and Bread.

Oil-silk worn upon the breast, or hare-skin, or some other fur, by the perspiration which it excites, aids in soothing and tranquillizing the part. When the pain is excessively severe, leeches may be also applied; but if too frequently used, they produce debility, and add to the irritability of the system.

As constitutional remedies, the Submuriate of Mercury with Opium and Conium should be given for a time, with an occasional aperient; and then the medicine which I have prescribed

with most advantage in lessening the irritability of the part, is as follows :—

R. Extracti Conii,
Extracti Papaveris, āā gr. ij.
Extracti Stramonii,
ē Seminibus, gr. fs.
M. ft. Pilula.

Treatment. The above pill may be given twice or three times during the day; but half a grain of the Stramonium is sometimes too strong a dose, when half that quantity will suffice.

To restore the uterine secretion, the Carbonas Ferri, the Ferrum Ammoniatum, or the Mistura Ferri Composita, may be either of them given, combined with Aloes. An hip-bath of sea-water, or an artificial salt-water bath, may be used from 100 to 105 Gr.

No operation is really required for this disease; but some patients are anxious for the removal of the tumour, from an apprehension of its being, or of its becoming, of a malignant nature.

The cases illustrative of this disease so much resemble each other, that it would be useless to detail them at length; and all therefore I shall do, is to quote from my note-book, memoranda which I have made of a few of the numerous examples which I might have had an opportunity of observing.

Consultations Mrs. ——, aged 40, has three children. She has no swelling in her breasts, but they feel cold, then become excessively hot.

She has sometimes very violent pain in them during the day and night, which extends to the arms, is exceedingly increased by exercise, and which she describes to be of a burning kind. Her menstruation is much less than natural.

I ordered her Plummer's Pill, and Soda with Infusion of Cascarilla; but I do not know the result.

Miss ——, aged 20, has a tumour in the breast, which is extremely tender to the touch, and painful even to the elbow, and the pain is exceedingly increased before menstruation. She attributes the swelling to a blow. She received great benefit from the application of the Ceratum Saponis cum Opio, and from taking the Pilula Hydrargyri cum Extracto Cinchonæ.

A girl, aged 25, has pain just under the bosom, which extends to the shoulder, arm, and even to the elbow and hand; it ascends to the neck, and descends to the hip. She has a light complexion, is very florid, has great pain in her loins, but her menstruation is quite regular, as regards colour, quantity, and time. Her bowels are costive; her breasts occasionally swell; and she has great pain in the bosom just prior to menstruation. Cupping, leeches, and purging have been tried without effect. I ordered Hydrargyrus cum Creta with Soda, and the Soap Cerate with Opium.

Miss ——, aged 20, has an exquisitely sensitive tumour in the breast: the pain extends from it to the axilla, shoulder, and arm. She is extremely irritable and nervous. She is not regular in

her menstruation; and prior to it, the pain is exceedingly increased. Her bowels are quite regular. She is unable to divine the cause of this tumour.

Miss J——, aged 18, has pain in the left breast, neck, shoulder, and arm, to the wrist: the pain is settled in the part, but is occasionally increased, and then shoots through the breast; the motion of her arm increases it, and she is unable to do any needlework. She cannot sleep upon that side. The complaint began in a swelling of the size of a pea, three years ago, and grew to that of a filbert. It frequently burns, and becomes red, and is larger and harder prior to menstruation. She has observed nothing peculiar in her bowels or menstruation. Her breast has been greatly relieved by taking the Pilula Hydrargyri at night, and the Ferrum Ammoniatum by day. Previously to her taking these medicines, she perspired greatly, and the perspirations have ceased. She was costive, but her bowels are now regular: the Ceratum Saponis was applied.

Miss L—— has a small moveable tumour in the left breast, and another not quite so large in the axilla, and neither the one nor the other exceeds the size of a small marble. Her age is 37. The tumours have existed two years; they are very tender to the touch, and often exquisitely painful. Mr. Abernethy had seen her, and ordered her Calomel at night, with a purge in the morning and a poultice at night, and a very warm covering to the part in the day.

Mrs. ——, aged 49, has an irritable breast without any tumour.

The disease commenced immediately after she had received a great alarm from some accident in a steam-boat, which produced a severe illness.

The pain she feels in the breast is pricking, as if, as she says, from a pin or fork.

If it has been examined by the finger, or pressed, it extends through the whole breast and to the shoulder, and then it aches like the pain of rheumatism.

There is no distinct tumour, but there is much fulness, and exquisite tenderness.

Miss W——, aged 39, received a blow upon her breast by stooping against a stick, and which produced a tumour there.

It feels as if a pea were deeply buried in the breast; it is most exquisitely tender to the touch, and she has pain to the shoulder and to the ends of the fingers.

It also affects the inner side of the chest on the diseased side.

It is extremely augmented by anxiety of mind, and it is increased prior to menstruation.

She has been advised friction, which greatly added to her suffering.

In the Plate, I have given a view of an irritable tumour taken from the leg of a lady, which I introduce here, because it well illustrates the appearance which these tumours assume; and the symptoms attending them are in a great degree similar to those of the same complaint in the breast.

Miss B——, a patient of Mr. Brock, of Guernsey, had twice felt a severe pain in her knee in walking at a considerable interval. Six weeks after the last attack, she discovered a little tumour, about the size of a pea, below the knee, which was extremely painful on the slightest touch: this I removed nine years ago. Twelve months afterwards she discovered, a few inches lower down in the limb, another swelling, which gave the same impression to the finger as the former, but it was more visible, as it projected the skin more; and it produced, as she expressed it, a scraping and pricking pain, as if numerous lancets were darted into the part, and as if all kinds of pain were there combined. It fortunately lasted only ten minutes at each attack; for if it had continued longer, it would have been intolerable.

The second tumour I removed eight years ago; and I had the pleasure of seeing her in October last, at which time she had not had any return of the disease.

CHAPTER X.

On Ecchymosis of the Breast.

Allied to the irritability of the breast, is a morbid change which occasionally happens, of a bruised appearance upon this organ, which occurs at each menstruation, and is accompanied with exquisite sensibility, pain, and tenderness.

The symptoms of this complaint are as follow:—It occurs in girls who are in most instances under twenty-two years of age. It is preceded by severe pain in the breast and arm. The extravasation of blood begins a few days before menstruation, and it appears principally in a large spot, as if a severe blow had been inflicted. Smaller and less vivid spots may also be observed in other parts of the breast: it is sometimes a concomitant of an unusually large bosom. The part is exquisitely tender to the touch, and the pain with which it is accompanied, passes down along the inner side of the arm to the ends of the fingers. It disappears a week after menstruation, in some cases; but in others, when it

Symptoms.

is more severe, it continues until the next time the patient is unwell. It looks like the ecchymosis which often succeeds the application of leeches; or like the extravasation of blood under the skin, which occurs in the arm after bleeding, when the opening in the skin has been smaller than that in the vein.

Sympathetic with the Uterus.

It is a curious occurrence, strikingly shewing the strong sympathy which subsists between the uterus and breast; for it is evidently the effect of the great determination of blood to the bosom just prior to the period of menstruation; and it indicates excessive irritability of the constitution, as well as the great delicacy and debility of the blood-vessels, which are unable to support this sudden determination which such sympathy produces.

This complaint is entirely unattended with danger; but being accompanied with diminished, irregular, and sometimes profuse uterine secretion, and by considerable debility and irritability of the constitution, two objects must be kept in view in its treatment.

Treatment.

:—the one is, by different forms of Steel medicines, to increase the quantity, and render regular the menstrual discharge; and the other, to augment the strength of the system, by the Infusion of Roses with Sulphate of Quinine.

As to local treatment, the best application is the Liquor Ammoniæ Acetatis, with Spirits of Wine, in the proportion of five ounces of the former, and one of the latter.

CASE I.

Miss G——, of Daventry, aged 17, has a bruised appearance of her breast; and the ecchymosis is like that which leeches, had they been applied, would have produced just under the skin.

This extravasation of blood, to which she has been repeatedly liable, begins about a week before, and disappears a week after menstruation. Before the blood is effused, she suffers severe pain in the bosom and arm: her menstruation is not regular; but she is unwell in that respect at distant and uncertain intervals, and then profusely.

When she consulted me, she had one large extravasation, and several smaller.

I ordered the Sulphate of Iron with Rhubarb; but I do not know the result.

CASE II.

Miss Gold, aged 21, who has very large breasts, has had the appearance of a bruise in the right bosom, and for two years has suffered great pain in it, which extends along the inner side of the arm to the ends of the fingers. She has also exquisite tenderness in it when it is slightly touched. She is corpulent and phlegmatic; she is subject to nausea, and her appetite is

extremely defective. Her bowels are costive, and her menstruation is irregular. The right breast is fuller than the other, and at one part rises into a slight swelling.

CASE III.

Mrs. ——, of Crewkerne, has her left breast enlarged:—there is a general fulness in it, and uneasiness from its weight; small knots can be felt from different parts of it; there is great tenderness to the touch, which is increased by exposure to cold, and the pain is augmented prior to menstruation.

The breast has occasionally the black and blue appearance of contusion. Her menstruation is not regular in point of time, and its quantity is greater than is proper or natural.

CASE IV.

Mrs. Long, aged 21, who has been subject to indigestion, bilious attacks, and inflammation of the lungs, has had two children, and with the first had milk in the breast, but was too ill to suckle. In her second pregnancy she was subject to faintings, and had an inflammation on the lungs, for which she was frequently bled: the child was born alive, but died in three months.

Her left breast secreted milk, but the right did not produce any. Blood was discharged from the nipple for three or four days; then stopped; and after a time the bleeding was renewed, and that repeatedly: the most she discharged at any one time, was a tea-cup full. The milk in the left breast was also tinged with blood.

She was delivered in June 1821, and in October of the same year felt a tumour in the breast. In June 1822 the tumour continues, and is exquisitely sensitive.

END OF THE FIRST PART.

S. McDowall, Printer,
Leadenhall Street.

PLATE I.

Contains three views of cellulous Hydatids in the breast.

Fig. 1.—In the centre of this Figure one of these Hydatids is seen cut open, to shew the vascular lining of the bag which secretes the serous fluid which it contains; whilst around it numerous Hydatids appear of various sizes, from the head of the smallest pin to that of a large pea; each of these, when cut open, having the same appearance as that which has been opened in the centre.

Fig. 2 shews the anterior view of a breast similarly affected: at *a*, in its centre, the nipple is seen, and near the areola at *b*, two large Hydatids, marked *c;* also, near the nipple, a cluster of small Hydatids; and in other parts of the bosom, at *d d d*, several minute Hydatids' cells.

Fig. 3.—A posterior view of the breast, Fig. 2 shewing four large Hydatids near the centre at *f;* also a cluster of Hydatids, and a number of these cells at *g g*, in various parts of the breast.

PLATE II.

This is the breast of Lady H——, whose case I have given in the preceding Observations. A section has been made through it, and it will be seen to be composed of a solid fibrous material (coagulable lymph), in which there are cavities containing Hydatids.

A. an Hydatid of considerable size.

B. a cluster of Hydatids in the centre of the breast.

At C. is a bag which contained a fluid, into which the Hydatid is seen growing; and near it is a large Hydatid, *a*, contained in a similar bag. In various parts of the breast other Hydatids may be seen growing.

PLATE III.

Is a view of the breast of Mrs. King. A section has been made through the centre of this disease; and it is seen to be composed, in its greater part, of a solid fibrine, effused by chronic inflammation; but in different parts of this solid texture, bags are seen, containing clusters of Hydatids growing from stalks. On the left portion, three of these cavities are seen; on the right, four; each containing clusters of Hydatids surrounded by a serous effusion.

a, one of the large bags.

b, a cluster of Hydatid cysts not completely evolved.

c, another cluster of Hydatids connected by a stalk.

d, a large bag in the left section.

e, a cluster of Hydatids connected by two stalks.

f, a small bag with a cluster of Hydatids in it.

g, a similar bag.

h, another containing Hydatids.

i, a similar bag, with Hydatids in it less evolved.

PLATE III

PLATE IV.

Different sections of Mrs. King's breast :—

Fig. 1 shews the vascularity of the effused fibrine.

Fig. 2. A section of the fibrine, with numerous Hydatids contained in it.

Fig. 3. A similar section, exhibiting the great vascularity of the fibrine, which also contains numerous Hydatids.

Fig. 4. The early appearance of these Hydatids.

Fig. 5 A cluster of Hydatids, with the stalk upon which they grew, cut through.

Fig. 6 exhibits a single Hydatid, of an oval figure.

Fig. 7. A single Hydatid, of different shape.

Fig. 8. Is a pyriform Hydatid.

Fig. 9. Two similar formed Hydatids in fibrine.

Fig. 10. A cyst, in which the Hydatids had been contained, exhibiting its great vascularity.

Fig. 11. One of these Hydatids, of a globular form.

Fig. 12. Sections of the Hydatids, to shew their laminated structure.

Fig. 13. A cyst, containing numerous of these Hydatids.

PLATE II

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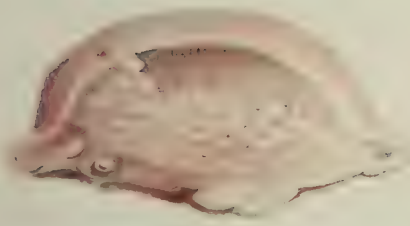

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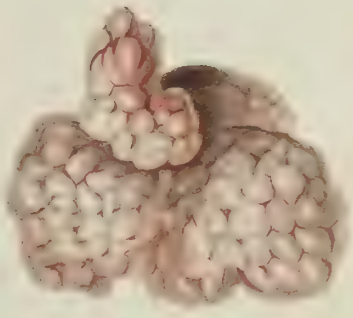

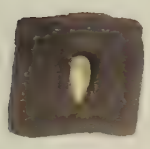

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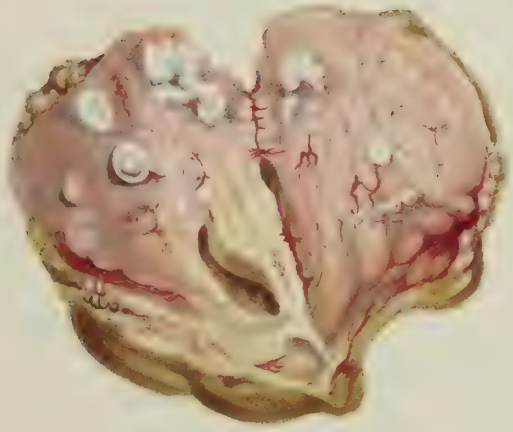

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PLATE V.

Figure 1 shews Hydatids imbedded in a scirrhous structure. This portion of the breast was removed from Miss S., who died some time after of cancer.—See the last case of cellulous Hydatids.

Figure 2 shews several small Hydatids in a tumour removed from the breast.

Figure 3 exhibits an immense number of small Hydatids in a portion of the breast which I removed from Mrs. Hewlett, the largest not bigger than a pea.—See Case.

Figure 4. An Hydatid bag cut open, and another seen through it.

Figure 5. A view of the globular Hydatid removed by Mr. Bayfield (see Case). A portion of the breast is seen, which was removed with it; close to it the cyst, formed by chronic inflammation, in which it was contained; and in the centre the Hydatid opened, and the appearance which it assumed, beautifully displayed.

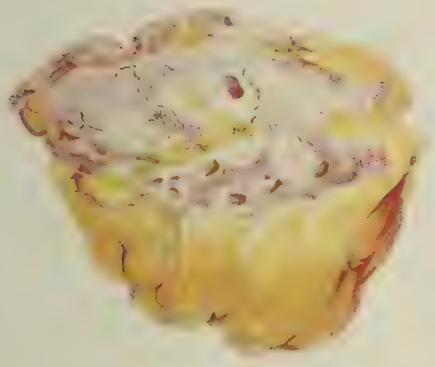

PLATE VI.

Shews different views of the Chronic Mammary Tumour.

Figure 1 exhibits one of these tumours cut open, and above it a portion of the breast to which it is attached.

Figure 2. Posterior view of the same, shewing its growth from the glandular structure of the breast.

Figure 3. One of these tumours cut open, to shew the lobes of which it is composed: above it a portion of the breast is seen, to which it adheres.

Figure 4. A larger tumour of the same species, separated from an aponeurotic cyst in which it is contained; and which is distinct, and dense in proportion in general to the size of the swelling.

Figure 5. One of these tumours, in part unravelled, after continued maceration in water.

PLATE VII.

Figure 1 shews a small Chronic Mammary Tumour growing from the breast.

Figure 2 exhibits one of these Chronic Mammary Swellings more imbedded in the glandular substance of the breast than usual.

Figure 3. Another of these swellings cut open, to shew its interior, and the cyst in which it is contained.

Figure 4. A Chronic Tumour in its cyst, very much resembling Figure 2.

Figure 5. A very large swelling of the same description, sent me by Mr. Bond, Surgeon, at Brighton, which was successfully removed.—See Case.

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PLATE VIII.

Figure 1. An Irritable Tumour cut open, its internal surface compact, smooth.

Figure 2 best exhibits the internal character of these swellings, *viz.* semi-transparent, circumscribed, texture close, resembling somewhat a nervous ganglion, but differing in its fibrous arrangement.

Figure 3 seems to be a mixture of the Chronic Mammary Tumour with the Irritable.

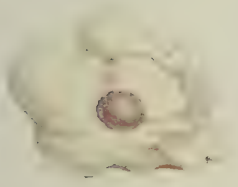
Figures 4, 5, 6, and 7. Irritable Tumours of the size which they frequently acquire, and in which they often remain.

Figure 8. An Irritable Tumour removed from the cellular membrane below the knee, in Miss B——, of Guernsey, shewing its similarity to those of the breast.—See Case.

Figure 9 is a section of a Scrofulous Tumour of the breast, shewing its yellow appearance, and unequal vascularity.

Figure 10. Cartilaginous and Ossific Tumour of the breast; the skin extended over it; two large portions of cartilage in the breast, below the skin; and beneath these a large piece of ossific matter is deposited.

PLATE VIII



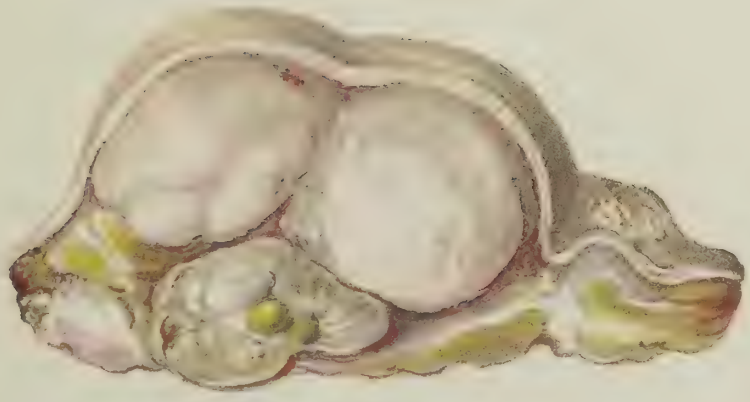


PLATE IX.

Figure 1. A globular Hydatid.

Figure 2. One of these Hydatids cut open, in order to shew the manner in which the young Hydatids grow by little stalks from the inner side of the parent Hydatid.

Figure 3. Two small Hydatids separated from the parent.

Figure 4. The tenia hydatigena, from the sheep; shewing the addition of a head, neck, and jointed appearance in that neck, which terminates in a Hydatid bag below.

Figure 5. Another of these Hydatids, sketched by Mr. Clift, shewing its mouth, jointed neck, and body.

PLATE IX.

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